What is claimed is:

1. Positioning apparatus for driving a movable member from a first position to a second positions where it stalls, the movable member having a bias urging the movable member to the first position and an electric drive member operable to drive the movable member through a connection against the force of the bias to the second position, the drive member exerting a force proportional to the electric current supplied to the drive member and wherein the current increases when the movable member stalls so as to produce an undesirable excessive force, comprising:

a drive circuit having an output connected to the drive member and operable to supply current to the drive member normally below a first level when the movable member is driven from the first position to the second position; and,

a current limiter connected to the drive circuit to detect the current supplied to the drive member, said current limiter operable upon detection of an increased current above the first level to reduce the current level supplied to the drive member to a level no greater than the first level.

2. Apparatus according to claim 1, wherein the movable member is a rotatable shaft, the bias is a spring, and the drive member is an electric brush motor.

3. Apparatus according to claim 1, further including a motion sensor operable to detect when the movable member stalls to produce a signal which changes the current supplied to the drive member to a second level below the first level and sufficient to hold the movable member in the second position against the bias.

4. Apparatus according to claim 3, wherein the motion sensor includes a Hall effect device.

5. Apparatus according to claim 3, wherein the motion sensor includes a counter to produce a count each time the current supplied to the drive member reaches the first level so as to reduce the current to the second level when the count reaches a predetermined number.

6. The method of determining that a movable member, driven by an electric drive member in which a drive force produced by the drive member varies with the current therein, has reached a stalled position comprising the steps of:

A. monitoring the magnitude of the current in the drive member ;

B. reducing the current to the drive member below the predetermined value when the monitored current reaches a predetermined value;

C. counting the number of times the monitored current reaches the predetermined value; and

D. producing a signal indicative of the movable member having reached the stalled position when the times counted reaches a certain number.

7. The method of Claim 6, further including the step of:

E. biasing the movable member away from the stalled position.

8. The method of claim 7, wherein step B comprises:

F. reducing the current in the drive member to a second predetermined value when the certain number is reached.

9. The method of claim 8, wherein the member is biased away from the stalled position and, the second predetermined level is at least sufficient to overcome the bias.

10. Apparatus for use in positioning a movable member between a first position and a stalled second position, comprising:

a bias device connected to the movable member to bias the movable member toward the first position;

an electric brush motor;

a drive connected between the motor and the member to allow the motor to drive the member from the first position to the second position against the bias of the bias device;

a source of energizing current;

a switch connected in circuit with the source and the motor and operable to energize and de-energize the motor, the current to the motor having a magnitude below a first limit whenever the motor drives the movable

member to the second position and a magnitude greater than the first limit when the movable member reaches the second position;

a current limiter operable to sense the current in the motor and operable, whenever the value becomes greater than the first limit, to operate the switch to return the magnitude to a value no greater than the first limit; and

a motion sensor operable to sense the movable member having reached the second position and to thereafter reduce the current from the source to a second value at least sufficient to hold the movable member in the second position.

11. Apparatus according to claim 10, wherein the source of energizing current includes a modulator and the switch includes a FET having a gate electrode.

12. Apparatus according to claim 11, further including a logic device connected between the modulator and the gate electrode, the logic device operable by a signal from the modulator to supply a logical "1" signal to the FET so as to energize the motor and a logical "0" signal to de-energize the motor respectfully.

13. Apparatus according to claim 12, wherein the modulator is controlled to produce current at the second level when the motion sensor indicates that the second position has been reached.

14. Apparatus according to claim 10, wherein the motion sensor includes a pulse counter positioned to detect when the motor is not driving.

15. Apparatus according to claim 10, wherein the motion sensor includes a counter connected to the current limiter to count the number of times the current reaches the first limit as an indication that the second position has been reached.

16. Apparatus according to claim 15, wherein the current to the motor is reduced to the second value upon the count reaching a predetermined value.

17. Apparatus according to claim 16, wherein the switch includes a FET.

18. Apparatus according to claim 17, further including a logic device connected to the gate electrode of the FET, the logic device operable to supply logic "1" and "0" signals to the gate of the FET so as to energize and de-energize the motor respectfully.

19. A modulator having a square wave output; and

a source of voltage which may have variable magnitude connected to the modulator so that the duty cycle of the square wave output changes inversely with the magnitude of the voltage to produce a duty cycle that is larger for smaller voltages and smaller for larger voltages to minimize the variation of the product of duty cycle and voltage.

20. Apparatus according to claim 19, wherein the modulator includes a comparator having a positive input connected to the source of voltage, a negative input connected through a capacitor to a reference voltage, an output connected to a regulated voltage (VCC) and to the negative input of the comparator; and

an inverter connected to the output of the comparator to produce an inverted output of the modulator.

21. Apparatus according to claim 19, wherein the modulator is included in a circuit for use with a motor driven from the source of voltage and including a switch connected to the motor to turn the motor on and off in accordance with an input signal; and

means connecting the modulator to the source of voltage so that when the duty cycle of the square wave output changes inversely with the magnitude of the voltage the speed variations in the motor are minimized.

22. Apparatus according to claim 21, wherein the modulator includes a comparator having a positive input connected to the source of voltage, a negative input connected through a capacitor to a reference voltage, and an output connected to a regulated voltage and to the negative input of the comparator; and

an inverter connected to the output of the comparator to produce an inverted output of the modulator.